

Power Saving

The Power Saving feature of the watch is turned on at the factory.

- Power Saving causes the watch to turn off the display automatically and enter a sleep state to save power whenever the watch is left in the dark.
- Note that the watch may also enter the sleep state if the watch is blocked from light by your sleeve.

■ How the sleep state works

• Display sleep state

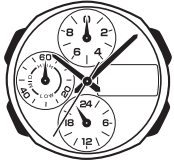
The display sleep state is triggered whenever the watch is left in the dark for three or four days.

- The display goes blank in the display sleep state. Alarms and the hourly time signal continue to operate normally, while the watch is in the display sleep state. Even when the watch is in the sleep state, digital-analog time synchronization and auto signal receive are both performed.

• Function sleep state

The function sleep state is triggered whenever the watch is left in the dark for four days.

- Alarms and the hourly time signal are also disabled while the watch is in the function sleep state.
- In the function sleep state, analog timekeeping is disabled, so digital-analog time synchronization is not performed.
- Digital timekeeping functions continue to operate normally in the function sleep state.



■ To recover from the sleep mode

Place the watch in an area that is well-lit, press any button, or angle the watch towards your face to illuminate the display using the Auto Light ("To illuminate the face with the auto light switch").

- It can take up to two seconds before the display re-appears after you place the watch in a well-lit area.

■ To turn power saving on and off

See the procedure under "To configure Home Time Zone settings" for information about turning off power saving.

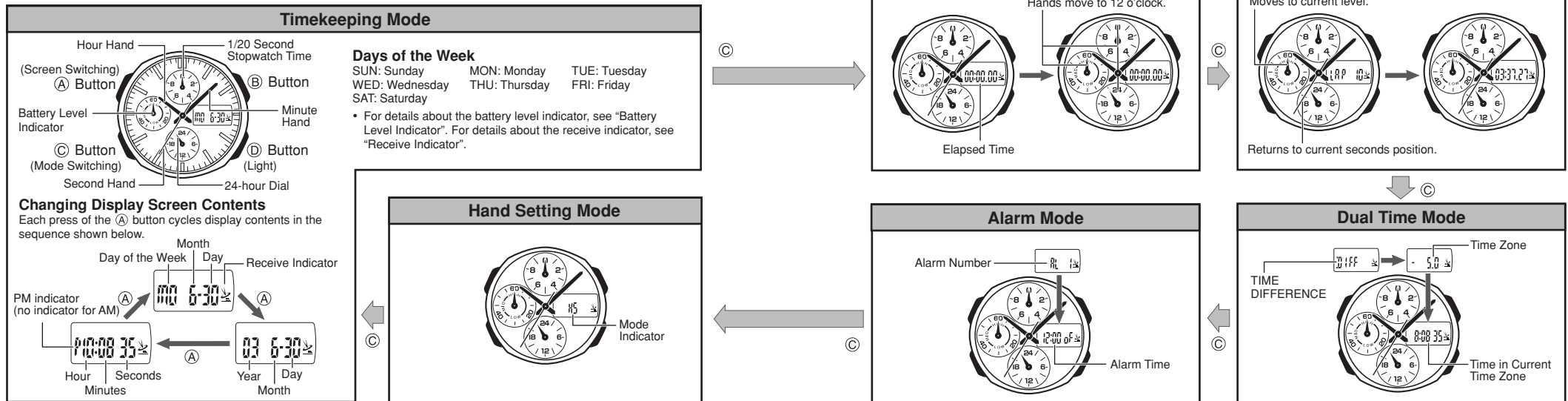
Leaving the watch in a drawer or anywhere else it is dark can cause the power saving mode to trigger in order to conserve battery power.

Modes and Display Screens

• The analog hands are not shown in the face illustrations shown in this User's Guide.

Each press of the **(C)** button sounds a confirmation tone and cycles through available modes in the sequence shown below.

- The watch will automatically revert to the Timekeeping Mode if you leave the Alarm (except for the target alarm remaining time screen), Recall, or Hand Setting screen displayed without performing any operation for about two or three minutes.



Power Supply

The power supply of this watch uses a solar cell to generate electrical power, which is stored by a rechargeable battery. Using or storing the watch where it is not regularly exposed to light, or allowing it to be blocked from light by your sleeve for long periods as you are wearing it can cause the power of the rechargeable battery to run down. To ensure stable operation, be sure to allow the watch to be exposed to light as much as possible when you are wearing or storing it.

Note that all data in memory and all settings are cleared whenever you allow the level of the rechargeable battery to drop to Level 4.

Battery Level Indicator

Level 1		Normal operation enabled.
Level 2		Normal operation enabled.
Level 3		Digital display, illumination, alarms, tones (alarms, hourly time signal), signal reception, digital-analog synchronization disabled.
Level 4		All functions, including timekeeping, disabled.

- In the Stopwatch Mode, the battery level indicator dial functions as the elapsed time minute hand.
- Exposing the watch to direct sunlight or other strong light may cause the battery level indicator to indicate a level momentarily that is higher than the actual battery level. Because of this, you should wait for a short while after charging to check the battery level indicator.
- Signal reception resumes when the battery is recharged to Level 2.
- Even after the battery drops to Level 4, you will be able to resume normal operation by charging the battery. After the digital display appears, configure time and date settings.

Start charging at Level 3!

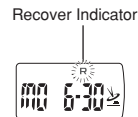
Battery Level 3 indicates that remaining battery power is very low. Be sure to expose the watch to light for recharging as soon as possible after Level 3 is indicated.

Flashing Recover Indicator

If you use the light or alarm a number of times during a short period, a recover (R) indicator flashes on the display and the following operations become disabled as battery power recovers.

- Display illumination,
- Alarm and hourly time signal
- Time calibration signal reception
- Analog-digital synchronization

Normal operation will return after the battery recovers.



Charging Precautions

Avoid charging the watch in the following locations, and anywhere else where the watch may become very hot.

- On the dashboard of an automobile parked in the sun
- Very close to an incandescent light source or other sources of heat
- In a location exposed to direct sunlight for long periods or a location that is very hot

Note that the display panel may become black under very high temperatures. This is temporary, and the display will appear normal again at lower temperatures.



Depending on the light source you are using, the case of the watch may become quite hot during charging. Take care to guard against burn injury after charging.

To charge the battery

Point the solar panel (face) of the watch at a light source.

- Remember that even a partial blockage of the solar cell reduces charging efficiency.

Example: Positioning the watch



- The illustration shows the resin band model.

Charging Guide

Starting from a full charge, the watch should be able to continue operating for about five months without further charging under the conditions described below.

- Daily Use (All time values are approximate.)
- Illumination: 1.5 seconds
 - Alarm: 10 seconds
 - Signal reception: 5 times

Making sure the watch is regularly exposed to light ensures stable operation.

Required Daily Charging Time

- The following is the daily amount of charging required each day to support the operations under "Daily Use".

Exposure Level (Brightness)	Approximate Exposure Time
Outdoor Sunlight (50,000 lux)	5 minutes
Sunlight Through a Window (10,000 lux)	24 minutes
Daylight Through a Window on an Overcast Day (5,000 lux)	48 minutes
Indoor Fluorescent Lighting (500 lux)	8 hours

- Charge Times Required to Advance to a Higher Level

Exposure Level (Brightness)	Approximate Exposure Time		
	Level 4 → Level 3	Level 3 → Level 2	Level 2 → Level 1
Outdoor Sunlight (50,000 lux)	1 hours	14 hours	4 hours
Sunlight Through a Window (10,000 lux)	3 hours	71 hours	20 hours
Daylight Through a Window on an Overcast Day (5,000 lux)	5 hours	---	---
Indoor Fluorescent Lighting (500 lux)	49 hours	---	---

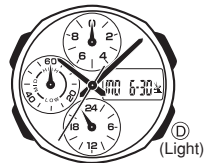
- Note that the above charging times are for reference only. Actual charging time depends on a variety of environmental factors.

Face Illumination

An LED light is used to illuminate the face of the watch for easy reading in the dark. An auto light switch automatically illuminates the face when you angle the watch towards your eyes for reading.

To illuminate the face manually

Press the **(Light)** button in any mode (as long as a setting screen is not displayed) to illuminate the face of the watch.



- Pressing the **(Light)** button illuminates the face regardless of whether the auto light switch is on or off.
- You can use the procedure under "To specify the illumination duration" to configure the illumination duration as approximately 1.5 seconds or 2 seconds.

You may hear a faint rattling sound when you move the watch around. This sound is caused by the movement of a metal bulb that controls operation of the auto light switch, and does not indicate malfunction.

To illuminate the face with the auto light switch

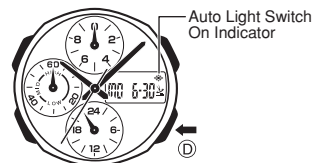
The auto light switch automatically illuminates the face whenever you angle the watch towards your eyes for reading, but only when it is dark.

- The auto light switch does not illuminate the face when surrounding light is bright.

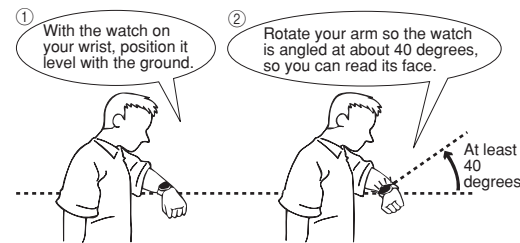
You can use the procedure under "To specify the illumination duration" to configure the illumination duration as approximately 1.5 seconds or 2 seconds.

To turn the auto light switch on and off

While any screen (besides a flashing setting screen) is on the display, hold down the **(Light)** button for about two seconds to toggle the auto light switch on (auto light switch on indicator displayed) and off (no indicator displayed).



Positioning Your Arm Correctly



- You should be wearing the watch on the outside of your wrist when using the auto light switch.
- Make sure that the left (9 o'clock) and right (3 o'clock) sides of the watch are within ± 15 degrees of being parallel with the ground. The auto light switch may not operate properly if the angle is greater.



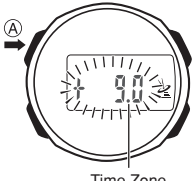
Important!

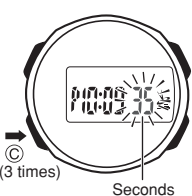
- The light may be difficult to see if you turn it on under bright sunlight.
- If you press any button or if an alarm operation starts while the face is illuminated, illumination will turn off.

Auto Light Precautions

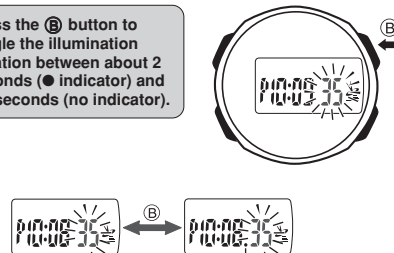
- Frequent use of the auto light can run down the battery.
- The auto light switch may cause the face to illuminate when your sleeve covers the face of the watch.
- The face may not illuminate immediately when you angle the watch towards your face. This does not indicate malfunction.
- The face remains illuminated for the currently set duration (1.5 or 2 seconds) only, even if you leave the watch angled towards your face.
- The face may illuminate unintentionally when you wear the watch on the inside of your wrist, when you shake your arm, or when you raise your arm. **Be sure to turn off the auto light switch whenever you do not need face illumination.**
- Keep the auto light switch turned off whenever you are wearing the watch on the inside of your wrist.
- Electro-static charge and magnetism can interfere with auto light operation and even make operation impossible. If this happens lower your arm to the starting position and then raise it again. If you still have trouble with illumination, try lowering your arm down to your side and then raise it to your face for reading.

■ To specify the illumination duration

- In the Timekeeping Mode, hold down the **(A)** button for about two seconds.
 - This will cause the currently selected time zone to flash on the display, and the second hand to move to 12 o'clock.

Time Zone
- Press the **(C)** button three times to display the flashing seconds count.
 

Seconds

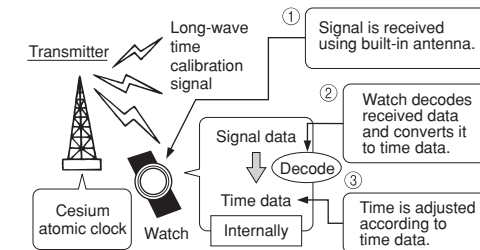
- Press the **(B)** button to toggle the illumination duration between about 2 seconds (● indicator) and 1.5 seconds (no indicator).
 

● indicator (Appears only on the setting screen.)
- After the setting is the way you want, press the **(A)** button to exit the setting screen.
 - The second hand will move to the current time as kept internally, and resume normal movement from there.
 - The watch will also exit the setting screen automatically if you do not perform any operation for about two or three minutes.

How a Radio-controlled Watch Works

What is a radio-controlled watch?

Your radio-controlled watch is designed to receive a time calibration signal that contains standard time data, and adjust its current time setting accordingly.



After the watch receives the Standard Time signal, it performs internal calculations to determine the current time. Because of this, there may be an error of up to one second in the displayed time.

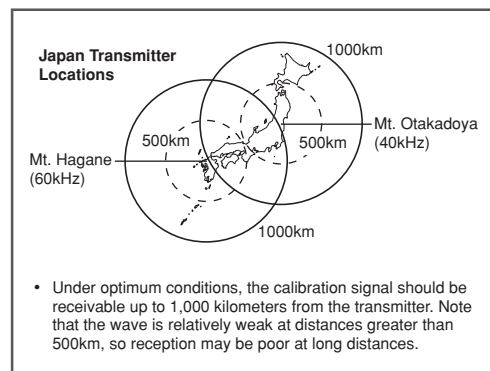
Calibration Signal

- The Japanese calibration signal (Call Sign: JJY) is maintained by the National Institute of Information and Communications Technology (NICT). It is a long wave signal transmitted 24 hours a day from the Mt. Otakadoya transmitter (40kHz) located in Tamura-gun, Fukushima Prefecture, and from the Mt. Hagane transmitter (60kHz) located on the border between Saga Prefecture and Fukuoka Prefecture.

Note that transmission of the time calibration signal may be interrupted occasionally due to maintenance, lightning, etc.

Reception Range

This watch can be configured to select the strongest Japanese signal (40kHz Mt. Otakadoya signal or 60kHz Mt. Hagane signal), and use that one for calibration. is stronger.

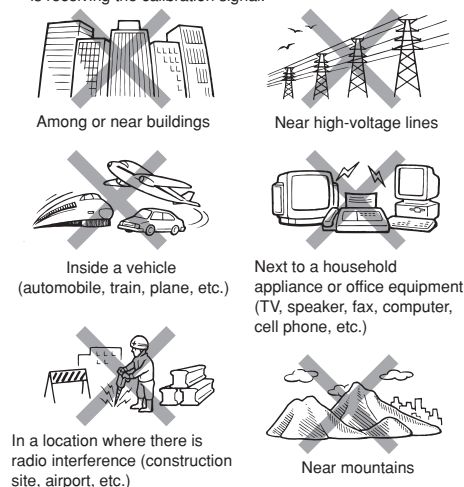


- Geographic contours, nearby buildings, seasonal conditions, the time of day, can even make reception impossible even when you are within range of the transmitter.
- Best reception is possible late at night.

Location

Reception is difficult and may even be impossible in the locations described below. Avoid such locations when performing signal reception.

- You should think of your watch operating like a radio or TV when it is receiving the calibration signal.



If you are experiencing problems with reception, move away from the types of locations described above to a location with better reception, and try again.

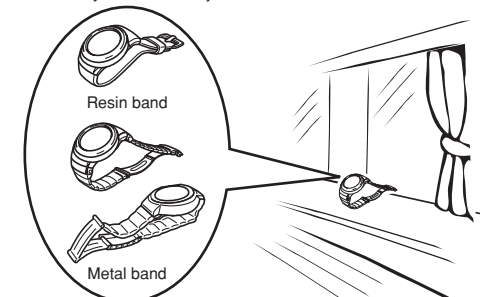
Receiving the Calibration Signal

There are two methods you can use to receive the time calibration signal.

- Auto receive (Reception is performed automatically at midnight, 1:00, 2:00, 3:00 and 4:00 each morning.)**
- Manual receive (You initiate reception using (B) button operation.)**
- If reception is not successful for any of the normal auto receive operations shown above, auto receive is performed one more time at 5:00 a.m.
- The watch is set up for auto receive at the factory, so all you need to do is to place it in a location that allows good reception each night.

■ To position the watch for optimum reception

Remove the watch from your wrist and place it somewhere so its top (12 o'clock side, where the antenna is located) is facing approximately in the direction of the signal transmitter. Keep the watch away from metal objects.



- Orienting the watch so it is sideways to the transmitter makes it more difficult to receive the signal.
- Do not move the watch while it is receiving the calibration signal.

■ Time Required for Reception

A calibration signal receive operation takes anywhere from about two to seven minutes.

- Note that when "A" (Auto Select) is specified as the transmitter selection mode, signal reception can take up to 14 minutes.
- See "Configuring Auto Receive Settings" for more information.

■ To perform manual receive

In the Timekeeping Mode, hold down the **(B)** button for about two seconds.



- The watch will beep and reception will start. The receive (⚡) indicator will appear on the display to indicate reception conditions.

■ To interrupt reception

Press the **(B)** button.

- All other buttons besides **(B)** are disabled during signal reception.

When reception is successful

The watch will terminate reception and adjust the current time. Next it will beep and then display the date and time that the adjustment was performed.

- The receive indicator (⚡) will remain on the display to indicate that reception was successful.
- The second hand will move to the correct position in accordance with the digital time, and resume normal movement from there.

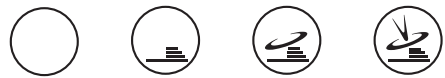
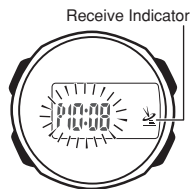
Reception Error

The will display "-- --" without adjusting the time setting when signal reception is unsuccessful for some reason.

- The watch will return to the Timekeeping Mode screen automatically if you do not perform any operation for about one or two minutes.

Receive Indicator

The receive indicator cycles from "Unstable" through "Stable" as shown below while reception is in progress. How far it cycles depends on the signal strength. Keep the watch in a location where reception is stable while reception is in progress.



Unstable Stable

- Even under optimum reception conditions, it can take about 10 seconds for reception to stabilize.

- Use the receive indicator to check reception status and to determine the best location for signal reception.
- Note that weather, the time of day, surroundings, and other factors can all affect reception.

Analog Hand Operation during Signal Reception

Second Hand

- Moves to 12 o'clock and stops when signal reception starts.
- Normal second hand movement resumes after reception is complete.
- If a button is pressed to terminate reception, the second hand moves to the second count of the digital time and resumes normal movement.

Minute and Hour Hands

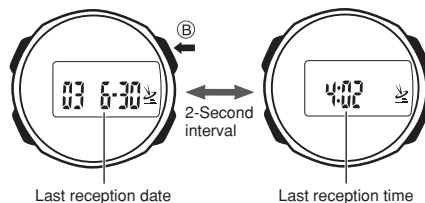
These hands operate normally.

The second hand does not move during signal reception.

To view the last reception date and time

In the Timekeeping Mode, press the **B** button.

- This causes the display to start alternating between the last reception date and the last reception time at two-second intervals.
- To return to the Timekeeping Mode, press the **B** button again.
- The watch will return to the Timekeeping Mode automatically if you do not perform any operation for about one or two minutes.



Last reception date

Last reception time

Configuring Auto Receive Settings

Use the procedure below to turn auto receive of the time calibration signal on or off. When **+9.0** (Tokyo) is selected as the time zone, you can also specify the transmitter selection mode, which controls which Japanese transmitter signal should be used for time calibration.

- For information about selecting a time zone, see "Configuring Home Time Zone Settings".
- The initial factory default settings for auto receive are Home Time Zone = **+9** (Tokyo); Auto Receive = **A** (On)
- The following procedure can be performed only when **+9.0**, is selected as the Home Time Zone.

To configure auto receive settings

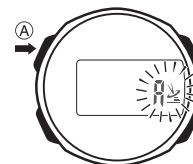
1. In the Timekeeping Mode, press the **B** button.

- This causes the display to start alternating between the last reception date and last reception time.
- The watch will return to the Timekeeping Mode automatically if you do not perform any operation for about one or two minutes.

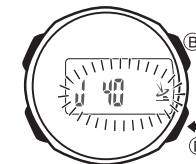


2. Hold down the **A** button for about two seconds.

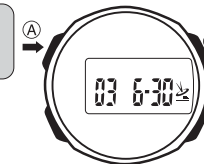
- This will cause the current auto receive setting to flash on the display.



3. Use the **D** and **B** buttons to cycle through the available auto receive settings.



4. When the setting is the way you want, press the **A** button.



- This will exit the setting screen and return to the last reception date and time screens.
- To return to the Timekeeping Mode, press the **B** button again.
- The watch will return to the Timekeeping Mode automatically if you do not perform any operation for about two or three minutes.

Auto Receive Settings when the Home Time Zone is +9.0

A (AUTO)

Auto receive turned on with automatic selection of either the Mt. Otakadoya signal (40kHz) or the Mt. Hagane signal (60kHz), whichever is strongest.

J40

Auto receive turned on for the Mt. Otakadoya signal (40kHz).

J60

Auto receive turned on for the Mt. Hagane signal (60kHz).

OFF

Auto receive turned off.

Calibration Signal Reception Precautions

- Auto receive can be performed while the watch is in the Timekeeping Mode or Dual Time Mode only.
- When a time calibration signal is received, the watch corrects its digital time setting first, and then adjusts the analog time setting accordingly. In order to ensure that the analog time matches the digital time, make sure you adjust the analog time to match the digital time before performing signal reception.
- The analog second hand does not move during signal reception, and so timekeeping may be off.
- Pressing any button while auto reception is in progress will cause the watch to beep and then exit the receive operation.
- Make sure you are within the range of the calibration signal transmitter before performing the reception operation. Remember that geographic contours, nearby buildings, seasonal conditions, the time of day, can even make reception impossible even when you are within range of the transmitter.
- Proper reception may be impossible if there is something blocking the signal. If reception is unsuccessful, try again.
- This watch is designed to adjust its current time setting in accordance with the calibration signal transmitted in Japan only. It operates like a standard (non-radio controlled) watch outside of the range of the receivable time calibration signal transmitters.
- When the watch is unable to adjust its time signal using the calibration signal for some reason, timekeeping accuracy is within ± 15 seconds per month.
- Strong electrostatic charge can cause timekeeping error.
- Signal reception is cancelled if the alarm starts to sound while it is being performed.
- The watch's calendar shows dates up to the year 2099. Attempting a receive operation after that causes an error.

Troubleshooting

I can't perform manual calibration signal reception.

Possible Causes

- The watch is not in the Timekeeping Mode.
- **+9.0** (Tokyo) is not selected as the time zone.

Recommended Action

- Enter the Timekeeping Mode before performing manual reception.
- Select the correct time zone Use the procedure under "Configuring Home Time Zone Settings" to select **+9.0** (Tokyo) as the time zone.

Though I have auto receive turned on, \pm does not appear on the display.

Possible Causes

- \pm is displayed after a time calibration is successfully received and the time setting is adjusted.
- \pm is not displayed if no signal reception operations are successful for one day. \pm is cleared from the display at 3:00 a.m. each day.
- Auto reception is not performed if the watch is not in the Timekeeping Mode or Dual Time Mode.
- \pm is cleared from the display if you perform a manual receive operation.

Recommended Action

- Make sure the watch is within the reception range of a time calibration signal transmitter.
- During the auto receive times, keep the watch in a location where reception is good.
- During the auto receive times, make sure the watch is in the Timekeeping Mode or Dual Time Mode.

Time calibration signal reception is successful, but the time setting is not correct.

Possible Causes

- If the time is one hour off, summer time (DST) is turned on.
- If there time is off by more than one hour, you may have the wrong time zone selected.

Recommended Action

- Use the procedure under "Configuring Home Time Zone Settings" to turn off summer time or to select the correct time zone.
- Is the correct time zone selected?

The auto receive settings can't be configured.

Possible Causes

- Auto receive settings cannot be configured unless **+9.0** (Tokyo) is selected as the Home Time Zone.

Recommended Action

- Use the procedure under "Configuring Home Time Zone Settings" to select **+9.0** as the time zone.

- Check the auto signal reception setting whenever you have problems with signal reception or when the time setting produced by signal reception is incorrect.
- The initial factory default configuration of the reception settings are shown below. You do not need to change these settings if you use the watch in Japan.

Auto Receive	\pm	Auto Japan transmitter select (40kHz/60kHz)
Time Zone	+ 9.0	Tokyo, Japan
Summer Time	7:5 \pm	Auto switching in accordance with signal data

Using the Alarms and the Hourly Time Signal

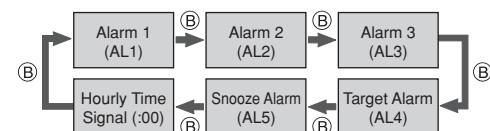
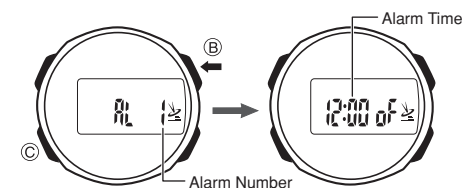
Using the Alarms

You can set up to five independent daily alarms. An alarm sounds for 10 seconds when an alarm time is reached.

To view the alarm time or target alarm time

In the Alarm Mode, press the **(B)** button to cycle through the alarm screens in the sequence shown below.

- The alarm number appears first, followed by the current alarm time setting.

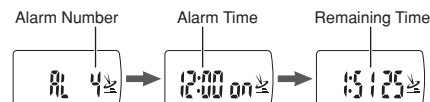


Types of Alarms

- Daily Alarms (AL 1, AL 2, AL 3)**
The watch beeps for 10 seconds when the alarm time is reached.
- Target Alarm (AL 4)**
With a target alarm, the time remaining until the alarm time counts down on the display. The watch beeps for 10 seconds when the alarm time is reached.
- Snooze Alarm (AL 5)**
With the snooze alarm, the watch beeps for 10 seconds when the alarm time is reached, and up to seven times at five-minute intervals thereafter. Pressing any button stops the beeper, but the alarm will sound again after five minutes.

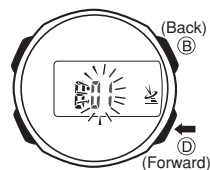
About the Target Alarm Time Screen

When you turn on the target alarm (AL 4), the display shows the alarm time momentarily and changes to show how much time remains until the target alarm time.



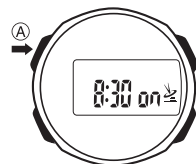
5. Use the **(D)** (+) and **(B)** (-) buttons to change the minute setting.

- Holding down either button scrolls the setting at high speed.



6. When the setting is the way you want, press the **(A)** button.

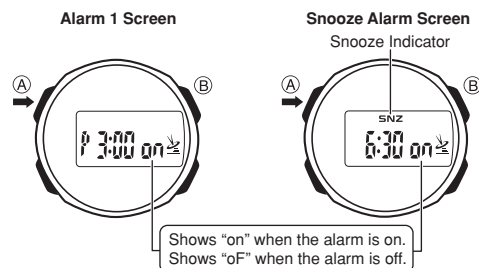
- This exits the setting screen.
- An alarm is turned on automatically whenever you change its settings.
- The display also will exit the setting screen automatically if you do not perform any operation for about two or three minutes.



To turn an alarm on or off

- In the Alarm Mode, use the **(B)** button to display the screen for the alarm (AL 1 through AL 5) you want to turn on or off.
- Press the **(A)** button to toggle the displayed alarm on or off.

- Turning on an alarm also causes its "on" indicator to appear. The snooze alarm screen also has a snooze indicator (SNZ).



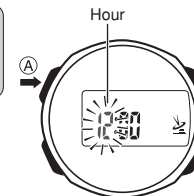
- Note that the "on" and "oF" indicators appear in the Alarm Mode only. The snooze indicator (SNZ) remains on the display in all modes.

To set an alarm time

- In the Alarm Mode, use the **(B)** button to scroll through the alarm screens (AL1 to AL5) until the one you want is displayed.



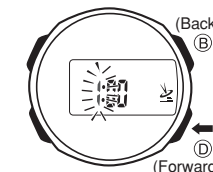
- Hold down the **(A)** button for about two seconds until the hour digits of the alarm time start to flash.



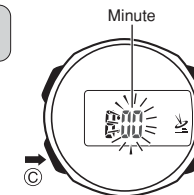
- This is the setting screen. At this time the displayed alarm turns on automatically. If you have the snooze alarm displayed (AL 5), the snooze indicator (SNZ) also appears at this time.

- Use the **(D)** (+) and **(B)** (-) buttons to change the hour setting.

- Holding down either button scrolls the setting at high speed.
- When setting the hour, make sure you specify AM (no indicator) or PM (P) correctly when using 12-hour timekeeping, or that you specify the correct 24-hour time.
- Alarm mode times are displayed in the same format (12-hour or 24-hour) that you selected in the Timekeeping Mode.



- Press the **(C)** button so the minute setting flashes.



To stop the alarm beeper

Press any button while the beeper is sounding to stop it.

- In the case of the snooze alarm the alarm will sound again in about five minutes. The snooze indicator flashes during the periods between alarms.
- The snooze alarm will be canceled automatically when any of the following occurs while the SNZ indicator is flashing on the display.
 - If you turn off the snooze alarm in the Alarm Mode
 - If you enter the Alarm Mode, display the snooze alarm screen, and then display the setting screen
 - If you enter the Timekeeping Mode and then display the setting screen

To test the alarm

In the Alarm Mode, hold down the **(B)** button to sound the alarm.

Using the Hourly Time Signal

The hourly time signal causes the watch to beep every hour on the hour.

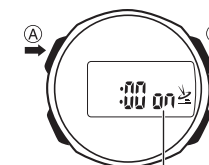
To turn the hourly time signal on and off

- In the Alarm Mode, use the **(B)** button to display the screen for the hourly time signal (:00).

- Press the **(A)** button to toggle the hourly time signal on or off.

- Turning on the hourly time signal causes its "on" indicator to appear.

Hourly Time Signal Screen



Shows "on" when the hourly time signal is on.
Shows "oF" when the hourly time signal is off.

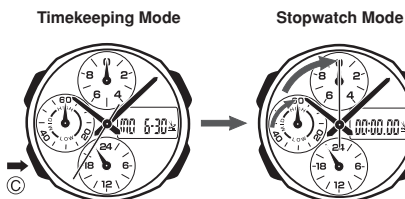
- Note that the "on" and "oF" indicators appear in the Alarm Mode only.

Using the Stopwatch

The stopwatch measures elapsed time in units of 1/100 second up to 59 minutes, 59.99 seconds (60 minutes). When the maximum limit is reached, the elapsed time automatically returns to zero and timing continues from there. Performing a lap/split operation automatically stores lap/split times in memory (up to 50 records). A simple operation lets you recall lap/split time records when you need them.

Entering the Stopwatch Mode causes the hands used for stopwatch timing to move automatically to the 12 o'clock position.

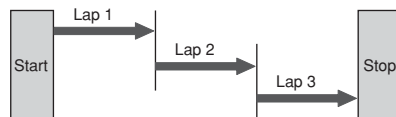
- If a stopwatch timing operation is in progress when you enter the Stopwatch Mode, the hands will move to the current elapsed time.



Lap Times

A lap time is the time that elapses during a specific portion of the race, such as a lap around a track.

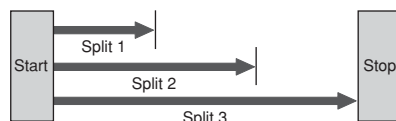
Example: Measuring the lap time for one lap of a track event, car race, etc.



Split Times

A split time is the time elapsed from the start, up to any point along the course of the race.

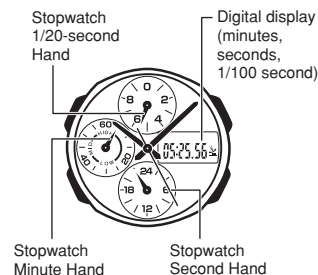
Example: Measuring splits every 10 kilometers



How Hands Operate in the Stopwatch Mode

In the Stopwatch Mode, elapsed time is indicated both by the digital display and by the hands of the watch. Resetting the stopwatch to zero causes the hands to return to the 12 o'clock position.

- In the Stopwatch Mode, the second hand indicates elapsed seconds, while the battery level indicator dial indicates elapsed minutes.
- When you start an elapsed time operation in the Stopwatch Mode and when you exit or enter the Stopwatch Mode while an elapsed time operation is in progress, the stopwatch 1/20-second hand rotates for one minute. After that it stops at the 12 o'clock position. Stopping the elapsed time operation causes the hand to move to the current 1/20-second position.

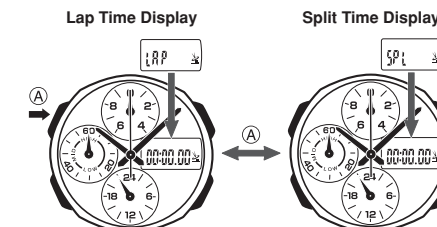


Selecting Lap or Split Time Display

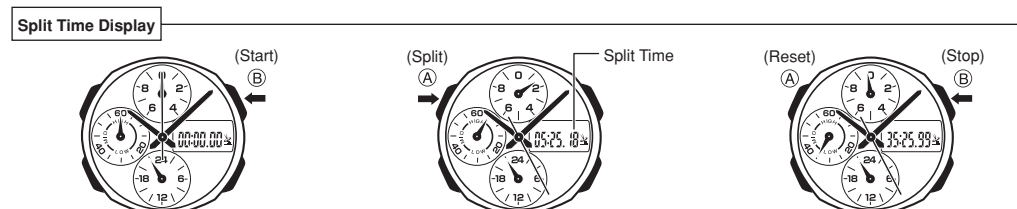
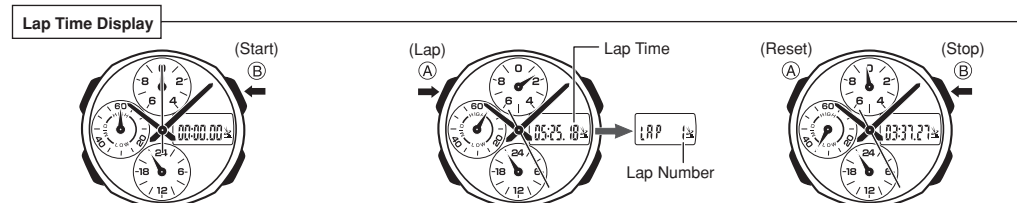
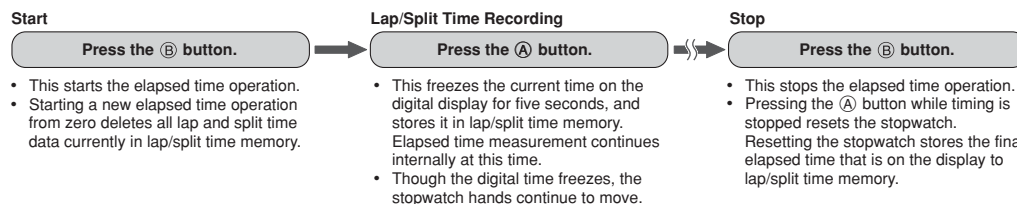
Before starting an elapsed time operation in the Stopwatch Mode, you should select display of either lap times or split times.

While the Stopwatch Mode screen shows all zeros, press the (A) button to toggle between the lap time ("LAP" indicator appears) and split time ("SPL" indicator appears) displays.

- Regardless of whether you select display of lap times or split times, both are stored in lap/split time memory during the elapsed time operation.



To perform stopwatch operations



Elapsed Time Measurement



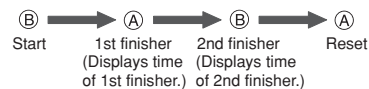
Cumulative Time Measurement

Pressing the (B) button to restart the stopwatch without resetting it to all zeros resumes elapsed time measurement from where it was last stopped.

Recording Lap/Split Times



Recording the Times of 1st and 2nd Place Finishers (Split Time Display)



Lap/Split Time Memory

You can store up to 50 lap/split times in memory. Performing a lap/split time operation when there are already 50 records in memory automatically deletes the oldest record to make room for the new times.

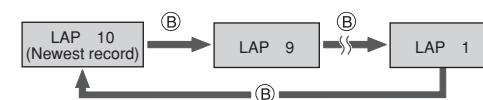
Viewing Lap/Split Time Memory Contents

Use the following procedure to recall lap/split time memory contents.

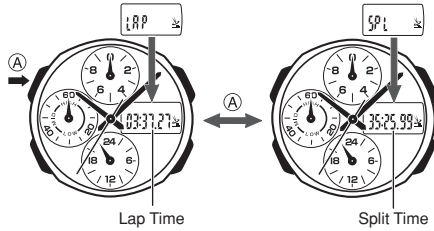
- Use the (C) button to enter the Recall Mode.
- Use the (B) button to scroll through lap/split time record numbers.

- Each press of the (B) button advances to the next older record.
- Holding down the (B) button scrolls through records at high speed.
- When you stop at a record, its lap time or split time will appear in place of the record number after a few moments.

Example: When there are 10 lap/split time records in memory



3. While any record is displayed, you can press the **(A)** button to toggle between the lap time and split time displays.



Clearing Lap/Split Time Memory Records

- Starting a new elapsed time operation from zero deletes all lap and split time data currently in lap/split time memory.
- You can also manually clear lap/split time memory by holding down the **(A)** and **(B)** buttons at the same time for about two seconds.
 - "LAP --" appears on the screen after lap/split time memory is cleared.
- Note that you cannot delete individual lap/split time memory records.

Dual Time Mode

- The Dual Time Mode provides you with easy access to the current time in any one of 29 time zones around the globe.
- When you enter the Dual Time Mode, the screen for the time zone that was displayed when you last exited the mode appears first.
 - The seconds count in the Dual Time Mode is linked with the Timekeeping Mode seconds count.
 - Dual Time mode times are displayed in the same format (12-hour or 24-hour) that you selected in the Timekeeping Mode.

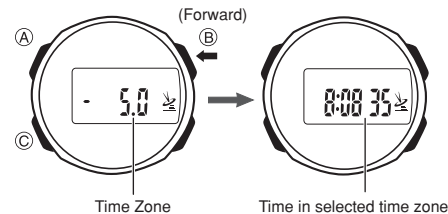
Important!

- If a Dual Time Mode time is incorrect, check the time setting and time zone setting of the Timekeeping Mode, and correct them if necessary.
- For information about selecting a Time Zone and setting the time, see "Configuring Home Time Zone Settings".

To search for a time zone

In the Dual Time Mode, press the **(B)** button to scroll through time zones.

- If you stop at a time zone, the current time will appear in place of the time differential after a few moments.
- Holding down the **(B)** button scrolls through time zones at high speed.
- The colon between the hour and minute digits flash in the Dual Time Mode.
- Pressing the **(A)** button in the Dual Time Mode displays the time differential of the currently selected time zone for about one second.

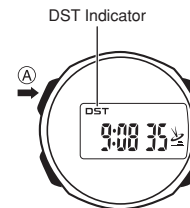


Using Summer Time (DST)

Summer time, or Daylight Saving Time (DST) as it is called in some countries, calls for setting clocks ahead one hour during the summer season. Note that the use of summer time depends on the country and even the local area.

To turn summer time on and off

- In the Dual Time Mode, use the **(B)** button to display the time zone whose summer time setting you want to change.
- Hold down the **(A)** button for about two seconds to toggle summer time on or off. The "DST" indicator appears on the display and timekeeping in the selected time zone is advanced by one hour when summer time is turned on.



- You can turn summer time on or off independently for each Dual Time Mode time zone. Note, however, that you cannot turn on summer time for the "G0.0" (Greenwich Mean Time) time zone.

Time Zone List

Time Zone	Cities	Time Zone	Cities
+12.0	Wellington, Christchurch	+1.0	Paris, Rome, Madrid, Frankfurt
+11.0	Noumea, Port Vila	+0.0	London, Dublin
+10.0	Sydney, Guam	G 0.0	Greenwich Mean Time
+9.5	Adelaide	-1.0	Azores
+9.0	Tokyo, Seoul, Pyongyang	-2.0	
+8.0	Hong Kong, Singapore, Kuala Lumpur, Beijing, Taipei, Manila	-3.0	Rio de Janeiro, Sao Paulo, Buenos Aires
+7.0	Bangkok, Jakarta, Hanoi	-4.0	Caracas, San Diego
+6.5	Yangon	-5.0	New York, Montreal, Miami, Boston
+6.0	Dakar	-6.0	Chicago, Houston, Mexico City
+5.5	Delhi	-7.0	Denver, El Paso, Edmonton
+5.0	Karachi	-8.0	Los Angeles, San Francisco, Las Vegas
+4.5	Kabul	-9.0	Anchorage, Nome
+4.0	Dubai, Qatar	-10.0	Honolulu, Papeete
+3.5	Teheran	-11.0	Pago Pago
+3.0	Jeddah, Kuwait, Moscow		
+2.0	Athens, Cairo, El Salaam, Helsinki, Beirut		

- The contents of the above table are current as of June 2004.
- Time zones in the above table are in accordance with Universal Time Coordinated (UTC).

Configuring Home Time Zone Settings

You can use the following procedure to set the current time and date of the Timekeeping Mode Home Time Zone.

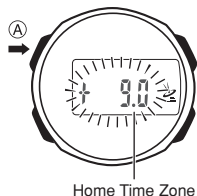
- Always use the Timekeeping Mode to set and adjust current time and date settings.

If you are planning to manually change both the digital and analog settings, be sure to adjust the digital setting first.

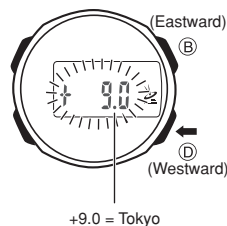
■ To configure Home Time Zone settings

- In the Timekeeping Mode, hold down the (A) button for about two seconds until the Home Time Zone setting starts to flash on the display.

- This is the setting screen.
- The second hand moves to 12 o'clock at this time.



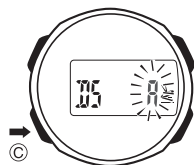
- Use the (D) (Westward) and (B) (Eastward) buttons to scroll through the time zones until the one whose time you want to set is displayed.



- See the "Time Zone List" for more information about time zones.

- Holding down either button scrolls the setting at high speed.

- Press the (C) button so the summer time setting is displayed.



- Press the (D) button to cycle through the summer time settings until the one you want is displayed.



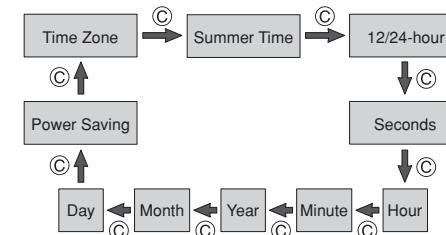
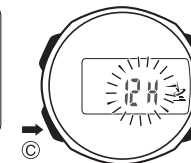
- DS A**
This setting enables the auto summer time setting, which turns summer time on or off in accordance with the received time calibration signal.

- DS OFF**
This setting turns off summer time, and displays the current time normally.

- DS On**
This setting turns on summer time.
Selecting this setting displays the DST indicator, and advances the current time setting by one hour.

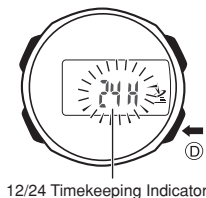
- Note that pressing the (D) button in the above step while any time zone other than +8.0, +9.0, -5.0, -6.0, -7.0, -8.0, or -10.0 will simply toggle the summer time setting between DS OFF and DS On.

- Use the (C) button to cycle through the time and date settings shown below. Each press of the (C) button causes the applicable setting to flash.

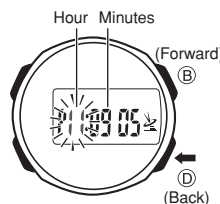


- Use the (D) and (B) buttons to change the currently selected setting.

- While the 12/24-hour setting is selected, press the (D) button to toggle the timekeeping format between 12-hour ("12H" indicator) and 24-hour ("24H" indicator).

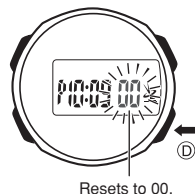


- While the hour, minutes, year, month, or day setting is flashing, use the (D) (+) button and (B) (-) button to change the setting.



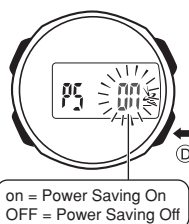
- Holding down either button scrolls the setting at high speed.
- When setting the hour, make sure you specify AM (no indicator) or PM (P) correctly when using 12-hour timekeeping, or that you specify the correct 24-hour time.
- You can set a year in the range of 00 (2000) to 99 (2099). The day of the week is set automatically in accordance with the date you set.
- The watch automatically makes adjustments for leap years and month lengths.

- While the seconds are selected, press the (D) button to reset them to 00 in accordance with the time signal on the radio, TV, etc.



- Pressing the (D) button while the seconds count is in the range of 30 to 59 resets it to 00 and also adds 1 to the minutes. Pressing the (D) button in the range of 00 to 29 resets the seconds count without changing the minutes.

- While the Power Saving setting is selected, press the (D) button to toggle it ON and OFF.



- When the setting is the way you want, press the (A) button.

- This exits the setting screen.
- The display also will exit the setting screen automatically if you do not perform any operation for about two or three minutes.

Digital-Analog Synchronization

The watch automatically adjusts its analog setting to match the current digital time setting.

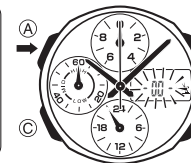
- When adjusting the analog time, the hands may move clockwise or counterclockwise.
- Depending on how many hours different the digital and analog time settings are, it may take some time for the analog hand setting procedure to be finished.
- After adjustment of the hour and minute hand, the second hand will adjust automatically to the digital time.

Adjusting the Analog Hand Positions

You can use the Hand Setting Mode to manually adjust the analog hand positions then they do not match the digital time.

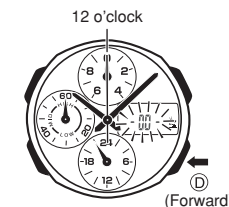
- Use the (C) button to enter the Hand Setting Mode.

- Hold down the (A) button for about two seconds until the second hand stops at the 12 o'clock position and "00" flashes on the digital display.

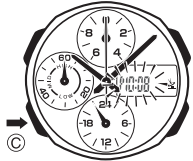


- If the second hand does not align with the 12 o'clock position by itself, use the (D) button to adjust it.

- Each press of the (D) button advances the second hand by one second.
- Holding down the (D) button advances the second hand at high speed.

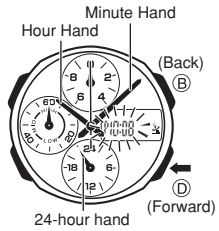


4. Press the **(C)** button to move the flashing between the hour and minute settings.



5. Use the **(D) (+)** and **(B) (-)** buttons to adjust the hour and minute hand positions.

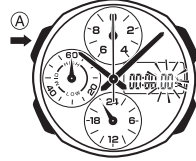
- Each press of the **(D)** button moves the hands 20 seconds clockwise, while the **(B)** button moves them 20 seconds counterclockwise.
- Holding down either button moves the hand at high speed.
- Note that the 24-hour hand moves in accordance with movement of the hour and minute hands. One full rotation of the 24-hand is 24 hours. When setting the hour and minute hands, make sure that you also keep an eye on the 24-hour hand to make sure that you set the analog time so it correctly matches the am/pm time on the digital display.



High-speed Hand Movement

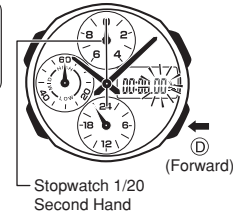
- While holding down the **(D)** button to start high-speed clockwise movement of the hands, press the **(B)** button to lock the high-speed movement.
- While holding down the **(B)** button to start high-speed counterclockwise movement of the hands, press the **(D)** button to lock the high-speed movement.
- High-speed movement will continue until it completes a 12-hour cycle, or until you press any button to stop it.

6. Press the **(A)** button to select the stopwatch 1/20-second hand for adjustment.

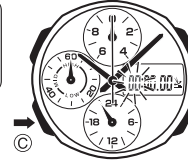


7. If the 1/20-second hand is not aligned with the 12 o'clock position, use the **(D)** button to adjust it.

- Each press of the **(D)** button advances the 1/20-second hand by one step.
- Holding down the **(D)** button advances the hand at high speed.

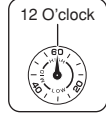
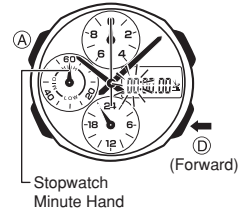


8. Press the **(C)** button to advance to setting of the stopwatch minute hand for adjustment.



9. If the stopwatch minute hand is not aligned with the 12 o'clock position, use the **(D)** button to adjust it.

- Each press of the **(D)** button advances the stopwatch minute hand by one step.
- Holding down the **(D)** button advances the hand at high speed.



10. When all the settings are the way you want, press the **(A)** button.

- This exits the setting screen and automatically synchronizes the minute hand with the current seconds count.
- At this time, the second hand will adjust automatically to the digital time.
- The display also will exit the setting screen automatically if you do not perform any operation for about two or three minutes.